

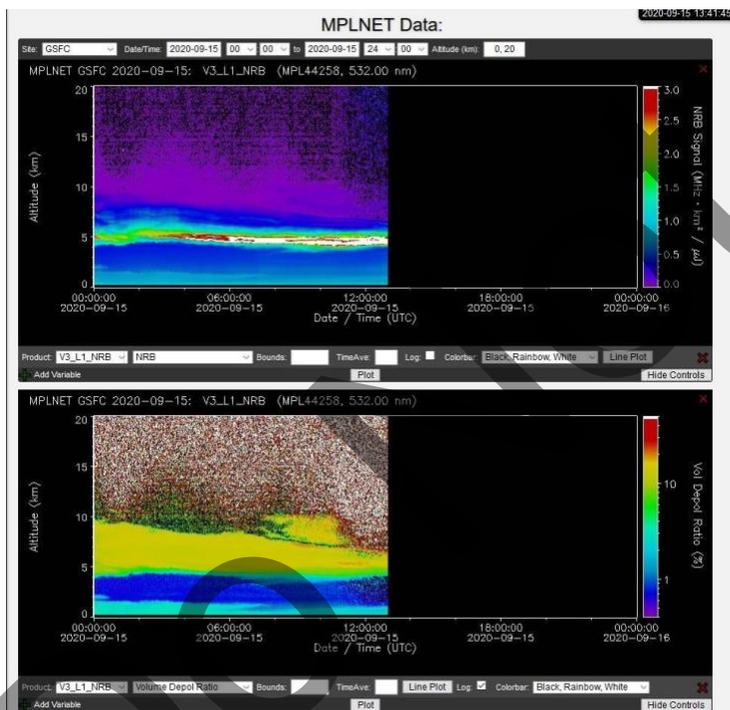
Flight Scientist Report
Tuesday 09/15/2020 ACTIVATE RF34

Flight Type: Statistical Survey Flight–ZIBUT to KENDA
Flight Route: KLFI ATLIC ZIBUT KENDA ZIBUT ATLIC KLFI KFAF KLFI

Special Notes:

This week has unusually good conditions as compared to rest of campaign thus far in terms of higher low cloud fraction and more vertically constrained clouds. There was a cold front and we will have post-frontal conditions at least today and tomorrow. The plan is to do a statistical survey today and then a process study flight tomorrow (the circle/dropsonde flight type that we did in winter).

Before the flight started, there was evidence of smoke plumes from CA in the MPL data at GSFC (below). There was a fair bit of haze in the satellite imagery.



King Air

Everything went as planned; “TCAS” failed on descent
6 dropsondes
Instruments worked fine

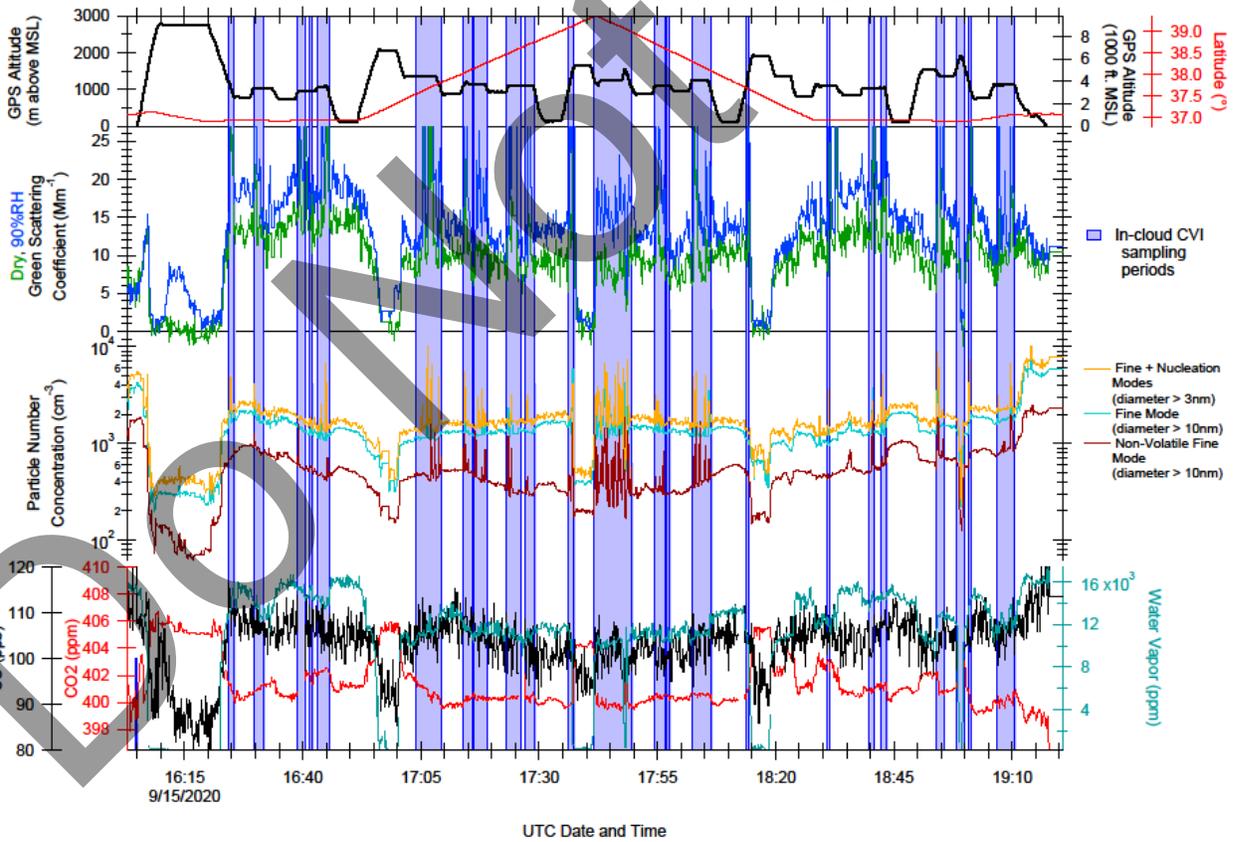
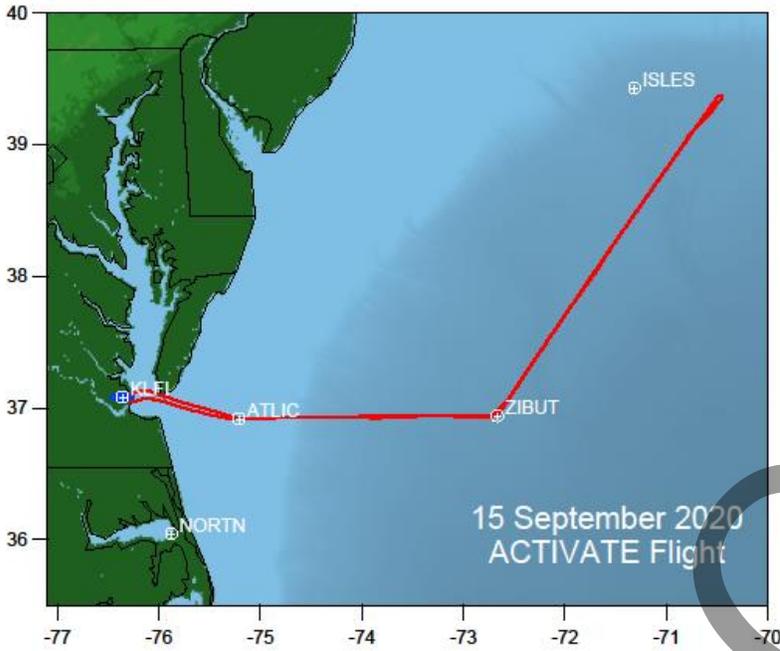
Falcon

CCN counter had flow problems first two-thirds of flight but Eddie managed to fix in flight.
Drying on nephelometer was good today since it was drier air outside.
Fairly clean conditions with smoke aloft.

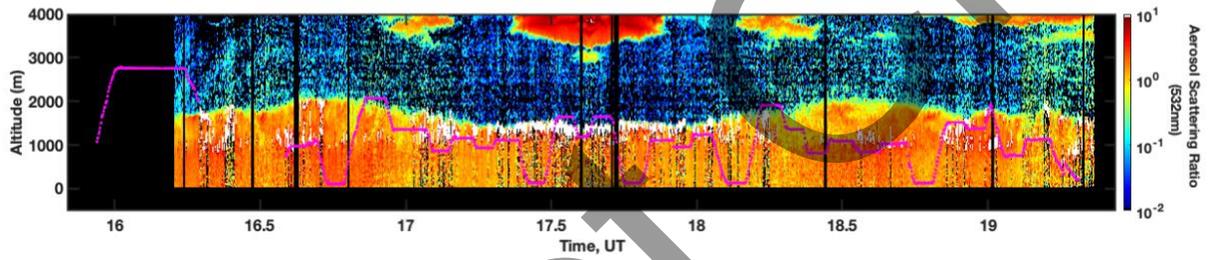
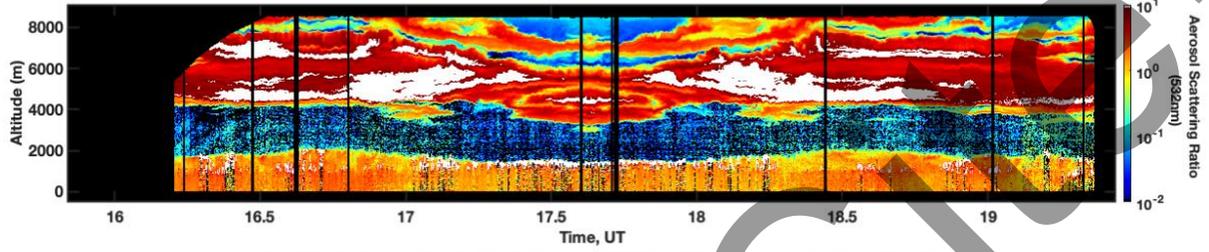
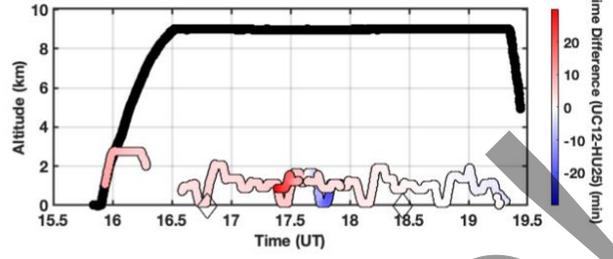
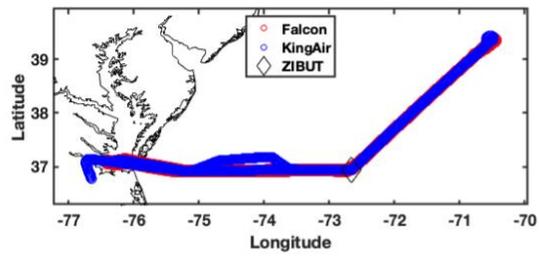
4 good cloud ensembles; RF34 looks correct. In 2 instances, we profiled up to sample the inversion structure in addition to the standard legs.

Do Not Cite!

Rich Moore Quicklook Images:



20200915 - ACTIVATE - KingAir and Falcon flight tracks

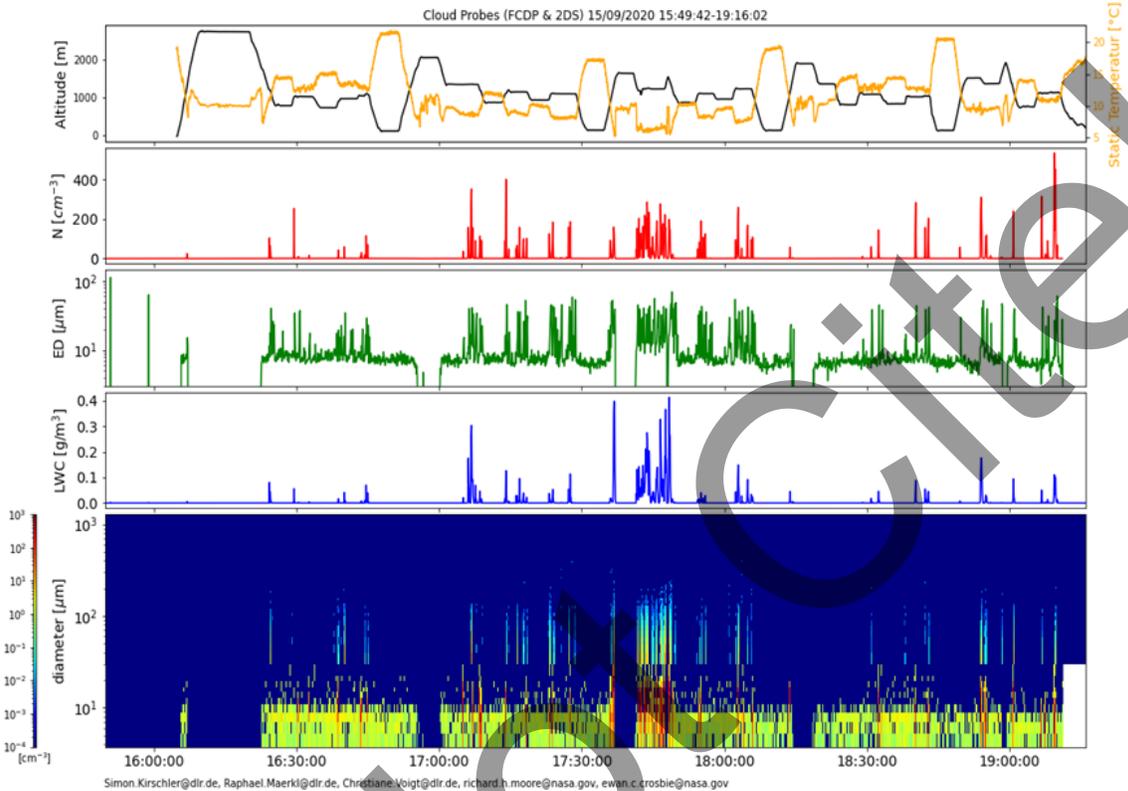


Do Not

Quicklook ACTIVATE Cloud Probes (FCDP & 2DS)

preliminary data, only for quicklook use

Simon Kirschler, Raphael Märkl, Christiane Voigt, Richard Moore, Ewan Crosbie



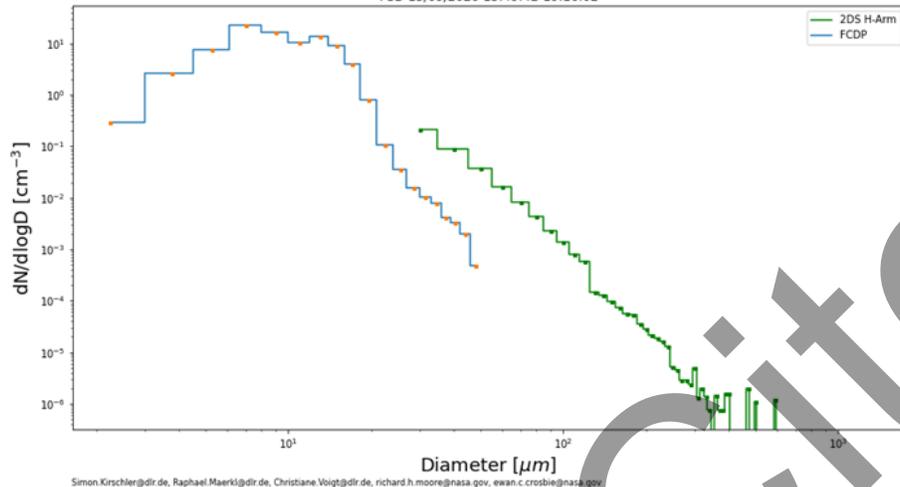
PSD ACTIVATE

preliminary data, only for quicklook use

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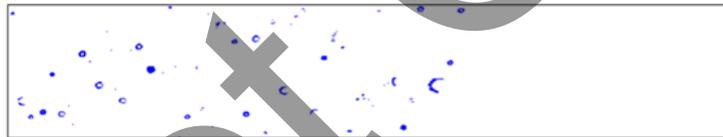


PSD 15/09/2020 15:49:42-19:16:02



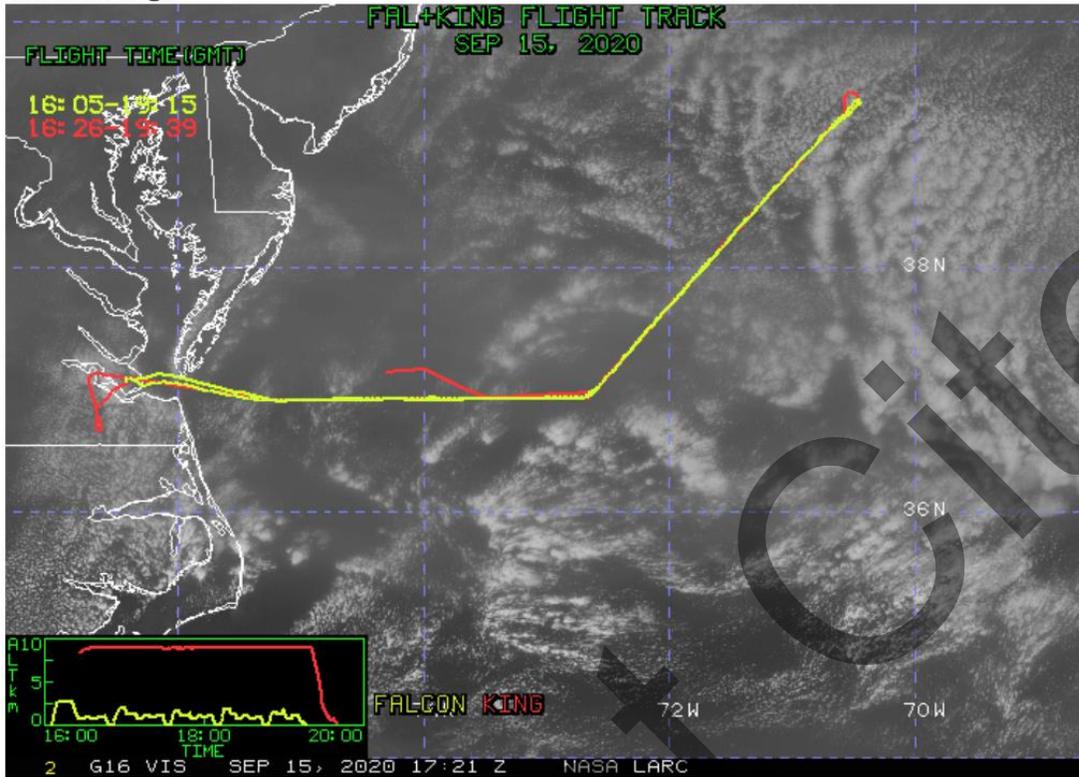
-pure liquid

-no precip

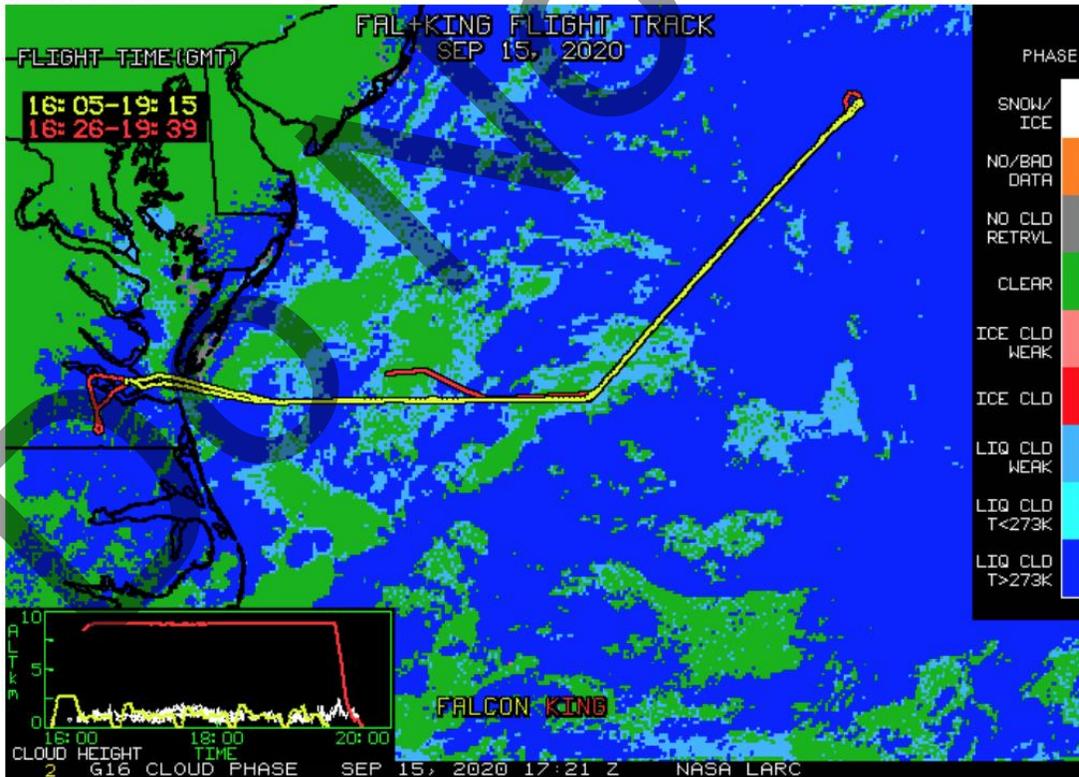


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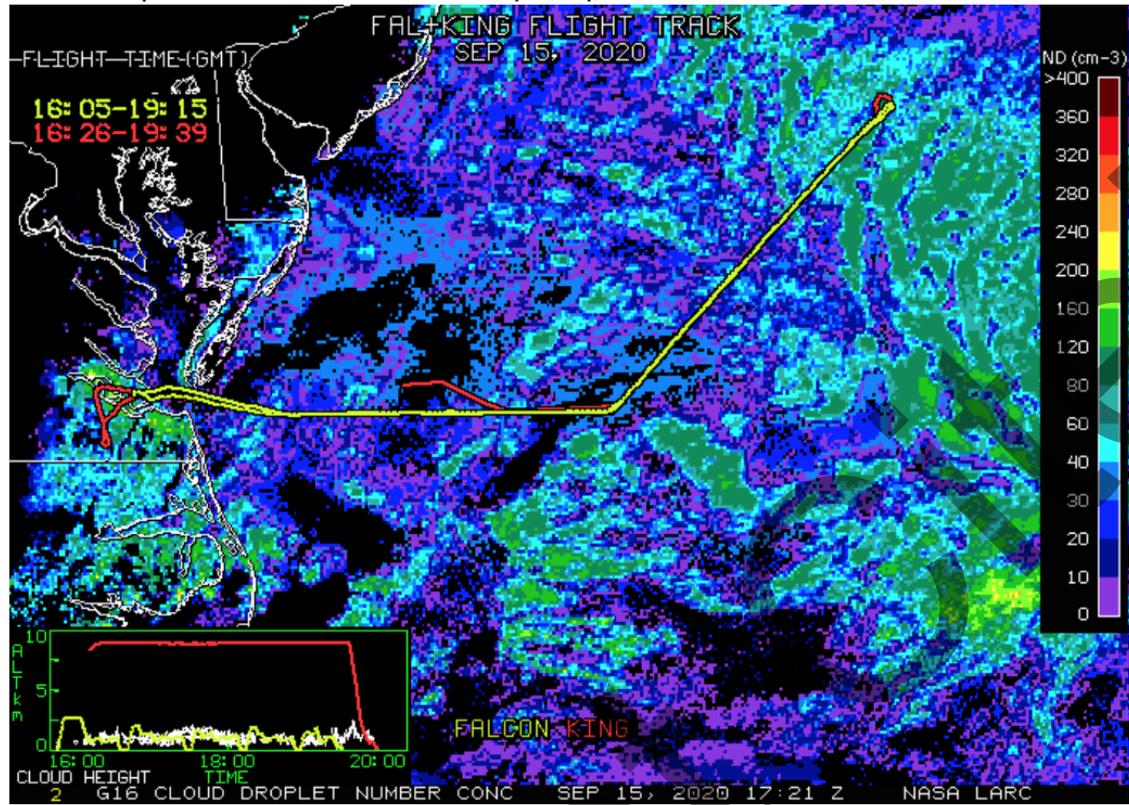
NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 34, 1721 UTC Sep 15, 2020
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

